

A P P E N D I X A

Claim 6. A surge protector as recited in claim 16 further comprising a coupling capacitor connected between the two power lines at the location adjacent to the building entrance.

Claim 10. A surge protector as recited in claim 16 further comprising a third protector sub-circuit connected between the first power line and the building ground, and a fourth protector sub-circuit connected between the second power line and the building ground.

Claim 12. A surge protector as recited in claim 16 providing AC power surge protection of greater than 10 kilovolts open circuit and 40,000 amperes short circuit.

Claim 13. A surge protector as recited in claim 16 wherein the protector is located within 2 meters of the building ground.

Claim 14. A surge protector as recited in claim 16 wherein the inductance between the protector and the building ground is less than 2.5 microhenries.

Claim 16. A permanently-connected building entrance shunting surge protector for a power line to a building having a building ground at a location adjacent to a building entrance,

said protector comprising a protector sub-circuit, said protector sub-circuit comprised of a metal-oxide varistor and a gas-discharge tube, said metal-oxide varistor and said gas-discharge tube being connected in series between the power line and the building ground at a location adjacent to the building entrance whereby surges on the power line are shunted to the building ground through said series-connected metal-oxide varistor and gas-discharge tube,

the gas-discharge tube having two line electrodes and there being two metal-oxide varistors in the protector sub-circuit,

with each of the two metal-oxide varistors connected to one electrode of the two line electrodes of the gas-discharge tube respectively, so as to provide paralleling of the metal-oxide varistors between the power line and the building ground through the gas-discharge tube.

Claim 17. The surge protector as recited in claim 16 characterized in that the power line is a multi-phase power line and that there are multiple protector sub-circuits

connected in series between the various phases of the power line and the building ground respectively.

Claim 18. The surge protector as recited in claim 16 characterized in that said metal-oxide varistor in series with the gas-discharge tube is connected to the power line.

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